

Serial No. 09/980,421
Puskas
Response to Final Office Action

Amendments to the Claims

Claims 1, 4-16 and 41-53 are pending in this application. Claims 11, 41, and 45 have been amended herein. All three claims have been amended to specifically recite that the catheter device is for delivering an electric pulse to a vagus nerve and the distal region electrode stimulates the vagus nerve. These amendments are well supported in the Abstract and in the Summary of the Invention.

Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Presently Amended) A catheter device for delivering an electric pulse to a vagus nerve, comprising
a distal region and
a proximal region,
said distal region having at least one expandable electrode and an electrode expanding means, the at least one expandable electrode being longitudinally arranged,
said proximal region having an electrical connecting means for applying an electric pulse to the expandable electrode in order to achieve controlled intermittent asystole by stimulating the vagus nerve.

Claims 2-3 (Cancelled).

4. (Previously Presented) The catheter device of Claim 1, wherein a portion of the expandable electrode is spirally arranged.

5. (Original) The catheter device of Claim 1, having from 1-24 electrodes.

6. (Original) The catheter device of Claim 1, wherein the expandable electrode is an electrode selected from the group consisting of a wire, a basket, a strip, or a plurality of electrodes dispersed on an electrically non-conducting material.

7. (Previously Presented) The catheter device of Claim 1, wherein the expandable electrode comprises a proximal region, a central region and a distal region, and wherein when the electrode is expanded the proximal region and the central region form a first angle between about 1 and 180 degrees, and the central region and the distal region form a second angle of between about 1 and 180 degrees.

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8. (Previously Presented) The catheter device of Claim 7, wherein the first and second angles are between about 90 and 180 degrees.

9. (Original) The catheter device of Claim 7, wherein the expandable electrode, when expanded, has a total length of between 1.0 and 15 cm.

10. (Original) The catheter device of Claim 7, wherein the central region is between about 0.1 and 10cm.

11. (Original) The catheter device of Claim 1, wherein the catheter has a lumen, and the electrode expanding means comprises a rod disposed within said lumen, and wherein the rod has a distal end connected to the expandable electrode so that the catheter forms a sheath over the expandable electrode means and the rod.

12. (Original) The catheter device of Claim 1, wherein the electrode expanding means comprises an inflatable balloon.

13. (Original) The catheter device of Claim 1, wherein the electrode expanding means comprises a metallic shape memory means.

14. (Original) The catheter device of Claim 1, wherein the expandable electrode means, when expanded is at least one arcuate electrode.

15. (Original) The catheter device of Claim 1, wherein the proximal end of the catheter has a handle and a hub, wherein the hub is connected to the means of applying an electric pulse to the expandable electrode.

16. (Original) The catheter device of Claim 12, wherein the balloon has at least one ridge thereon to allow the passage of fluid therearound, and wherein at least one expandable electrode is attached to said ridge.

17. - 40. (Cancelled)

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41. (Presently Amended) A nasogastric tube electrode for stimulating a vagus nerve comprising
a nasogastric tube having an inflatable means of expanding an electrode and
an electrode attached to said inflatable means so that when the inflatable means is
inflated, the electrode contracts the inner surface of the trachea and stimulates the vagus nerve,
and
a means of supplying an electric pulse to said electrode in order to achieve controlled
intermittent asystole.

42. (Original) The nasogastric tube electrode of Claim 41, wherein the inflatable means
of expanding the electrode is a collar or balloon.

43. (Previously Presented) The nasogastric tube electrode of Claim 41, wherein the
inflatable means has a ridge and an electrode on said ridge so that the electrode contacts the
tracheal wall when the inflatable means is inflated.

44. (Original) The nasogastric tube electrode of Claim 41, further comprising a plurality
of electrodes.

45. (Presently Amended) A nasogastric tube electrode device for stimulating a vagus
nerve comprising

a nasogastric tube having at least one expandable electrode thereon, so that the electrode
contacts a wall of the esophagus when the electrode is expanded and stimulates the vagus nerve,
and

wherein the electrode has a means for connection to an electrical pulsing means in order
to achieve controlled intermittent asystole.

46 (Original) The nasogastric tube electrode of Claim 45, further comprising a plurality
of electrodes.

47. (Original) The nasogastric tube electrode of Claim 45, wherein the expandable
electrode is longitudinally arranged.

48. (Original) The nasogastric tube electrode of Claim 45, wherein the expandable
electrode is circumferentially arranged.

49. (Original) The nasogastric tube electrode of Claim 45, wherein the expandable
electrode is spirally arranged.

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50. (Original) The nasogastric tube electrode of Claim 45, having from 1- 24 electrodes.

51. (Original) The nasogastric tube electrode of Claim 45, wherein the expandable electrode is an electrode selected from the group consisting of a wire, a basket, a strip, or a plurality of electrodes dispersed on an electrically non-conducting material.

52. (Previously Presented) The nasogastric tube electrode of Claim 45, wherein the expandable electrode comprises a proximal region, a central region and a distal region, and wherein when the electrode is expanded the proximal region and the central region form a first angle between about 1 and 180 degrees, and the central region and the distal region form a second angle of between about 1 and 180 degrees.

53. (Previously Presented) The nasogastric tube electrode of Claim 45, wherein the first and second angles are between about 90 and 180 degrees.

Claims 54-60 (Cancelled).